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# **ABSTRACT**

Methods and devices are provided for evaluating among the limbs of a subject the distribution of impairments of the subject's ability to coordinate the muscular contractions to execute effective postural movements. The subject may be placed on two independently movable support surfaces, either of which may be fixed or sway-referenced. The subject's ability to maintain his or her equilibrium position is then monitored. In another embodiment, the subject is perturbed from a position of equilibrium. The perturbation may be caused by a displacement of the support surfaces, or by having the subject grasp a handle, which may be moved, or against which the subject may push or pull. The latency and strength of the responses of the subject's limbs are measured and compared to each other and to a normal population.